JKW

PATENT
Customer No. 22,852
Attorney Docket No. 1165-906

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	
Akira Uedono et al.	Group Art Unit: 2881
Application No.: 10/649,664	Examiner: Johnnie L. Smith
Filed: August 28, 2003	
For: Defect Evaluation Apparatus Utilizing Positrons	Confirmation No.: 6918

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

INFORMATION DISCLOSURE STATEMENT

Enclosed for the consideration of the Examiner in connection with the prosecution of this case is a copy of a reference cited in the corresponding Japanese application and a Form PTO SB/08.

For the relevance of this reference, the applicants provide the following comments.

In the Office Action in the Japanese application, the Examiner stated that, as described in the reference and JP-A-2000-266699, a defect evaluation apparatus utilizing positron annihilation, comprising two γ ray detectors for detecting γ rays generated by annihilation of positrons, that are arranged facing each other across a sample and are connected to a circuit for measuring the detection timing for each γ ray detected by the γ ray detectors and for checking whether two γ rays simultaneously detected by the γ ray detectors are the two γ rays simultaneously emitted in opposite

directions by the annihilation of one positron, whereby energy spectrums of γ rays simultaneously emitted in opposite directions are measured, is well known in the art. The Examiner has deemed that conducting a defect evaluation by employing the constituent features as described in these references in the apparatus described in JP-A-7-270598 is a matter that a person with ordinary skill in the art could easily have conceived.

The block diagram of such a measurement system is depicted in Fig. 1 on page 624 of the reference. The English abstract on page 627 describes an application of such a system in the detection of vacancy-type defects in silicon materials, wherein a NaI detector is used in colinear geometry with a Ge detector.

Please further note that the reference describes, from page 623, right column, line 23 to page 624, left column, line 4, the following:

--However, due to low S/N ratios of semiconductor detectors, the resulting P/B ratios (peak to background ratio) have heretofore been low in the order of 10^2, and therefore it has heretofore been difficult to observe the Doppler broadening of the low counts of core electrons. In view of this, measurements of γ rays emitted by annihilations were carried out using a SSD (Ge detector) and an NaI scintillator arranged facing each other and the coincidences of the signals from these detectors were determined, and thereby the S/N ratio have been improved and the P/B ratio have been increased to approximately 10^4.--

Each item of information in this statement was first cited in any communication from a foreign patent office in a counterpart foreign application less than three months ago.

JPA-2000-266699 and JPA-7-270598 were cited in the information Disclosure Statement filed November 18, 2003.

If there is any fee due in connection with the filing of this Statement, please charge such fee to our Deposit Account No. 06-916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P.

December 6, 2004

By: _____
Arthur S. Garrett
Reg. No. 20,338

817736_1

IDS Form PTO/SB/08: Substitute for form 1449A/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/649,664
				Filing Date	August 28, 2003
				First Named Inventor	Akira Uedono
				Art Unit	2881
(Use as many sheets as necessary)				Examiner Name	Johnnie L. Smith
Sheet	1	of	1	Attorney Docket Number	1165-906

U.S. PATENTS AND PUBLISHED U.S. PATENT APPLICATIONS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] *(if known)*	Issue or Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

Note: Copies of the U.S. Patent Documents are not Required in IDS filed after October 21, 2004

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Translation[6]

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Translation[6]
		"Manufacture of a Colinear Geometry-Type Measurement System for Doppler Broadening Profiles of γ-Rays Emitted from the Annihilation of Positrons," RADIOISOTOPES, Vol. 47, No. 8, p. 623-627 (1998).	

Examiner Signature		Date Considered	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.